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Healthy Urban Living and Ageing in Place (HULAP): assessment of older people's physical activity and sedentary behaviour in the social environment.

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Context

Older adults are the largest population group worldwide, and incur the greatest health care costs. The number of the 'oldest old' (<80yrs old) is likely to increase threefold by 2050, to 392 million worldwide. Specifically, in Northern Ireland the older adult population has been projected to rapidly increase with around 23 percent projected to be aged 65 and over by 2035.

Active ageing is a global issue, with the majority of the world's population living in cities; increasing the need for implementation of the 'New Urban Agenda' to ensure 'age- and gender-responsive planning and investment for sustainable, safe and accessible urban mobility' 'linking people, places, goods, services and economic opportunities' (UN-Habitat111, 2016).

Previous research highlights the significant impact that the environment has on health, specifically, physical activity and sedentary behaviour, which are crucial for active ageing. A major concern relating to healthy urban ageing is the rapid social and built environment changes exposing vulnerable populations (low socio-economic status, older adults and women) to lower levels of physical activity (PA) due to motorised transportation, urbanisation and poor access to public infrastructure in Low-Middle Income Countries (LMICs). Consequently, there is a need to refocus and scale-up programmes, policies and actions to address physical inactivity.



Rationale

The rationale for the current study was to investigate and compare the relationship of the social environment with PA and sedentary time in older adults in the UK and to investigate the associations between the environment with physical functioning/BMI/specific age-related attributes.

Description

The current HULAP Study recruited older adults (> 60 years) to participate in the collection of PA, sedentary behaviour, health and social and built environment data. Older adults (≥60years, n=253) were sub-sampled from the Northern Ireland Cohort for the Longitudinal study of Ageing (NICOLA). A study and recruitment was stratified in Belfast by walkability and socio-economic status (SES): 1) low-SES/low-walkability; 2) low-SES/high-walkability; 3) high-SES/high-walkability; and 4) high-SES/low-walkability.

Participants who were recruited to the HULAP Project consented to wear an accelerometer (to measure physical activity and sedentary behaviour) and a GPS device (to locate their whereabouts) for a period of 7-days. Following the monitor wear time period, participants were asked to complete a survey which included questions regarding: demographic and psychosocial variables, International Physical Activity Questionnaire, Sedentary Behaviour, NEWS-A, health and social environment constructs.

Preliminary analysis

Theme 1. Demographics profile of HULAP project participants

Individual variables	Categories	Belfast (n=239)	
		n	%
Sex	Male	147	58.1
	Female	106	41.9
Age (years)	60-70	119	49.8
	71-80	95	39.7
	≥ 81	25	10.5

Preliminary results for the current study showed significant differences ($p < 0.05$) for:

- Reported levels of sedentary behaviour (week day and weekend day) and satisfaction with access to public transport in the neighbourhood
 - Sedentary behaviour on both week and weekend days was higher for those who were not satisfied
- Reported levels of sedentary behaviour (weekend day) and satisfaction with the conditions for walking in your neighbourhood
 - Sedentary behaviour on weekend days was higher for those who were not satisfied

No significant differences were found for moderate-to-vigorous physical activity and any of the neighbourhood satisfaction variables; and sedentary behaviour and satisfaction to shop access, the number of family or friends in the neighbourhood, access to public recreation areas, amenities, public safety, traffic, public services and general neighbourhood satisfaction.

In terms of moderate-to-vigorous physical activity significant differences were found for those who reported feeling left out ($p = 0.013$) and isolated ($p = 0.026$).

Next step/s

As our overall aim is to gain a deeper insight into the social and built environments of older adults, we are in the process of linking three data sources into a complex dataset: objective physical activity and sedentary behaviour data, GPS data and GIS maps and variables. The complex objective dataset will also be linked with the participants subjective dataset. By having access to a dataset of this kind we will be able to fully interrogate the data in order to further explain older adults physical and sedentary behaviours in the built and social environments. Analysis will not only enable us to make recommendations for further research but also to influence policy and practice.

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